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A. Differential Display Downstream Primer 7: (SEQ ID NO: 17)
5'TTTTTTTTTTTGA3'

B. Differential Display Upstream Primer 15: (SEQ ID NO: 18)
5'GATCAATCGC3'

C. 5'RACE Primer 2a: (SEQ ID NO: 19)
5'TAGGACATGCACAGTGTAATCTG3'

D. 5'RACE Primer 3a: (SEQ ID NO: 20)
5'GATTGTGCTGGCCACTTCTC3'

E. 5'RACE Primer 4a: (SEQ ID NO: 21)
5'GACACTCCAGGGACTGAAG3'

F. 5'RACE Anchor Primer: (SEQ ID NO: 22)
5'CUACUACUACUAGGCCACGCGTCGACTAGTACGGGIIGGGIIGGGIIG3'

G. 5'RACE Universal Amplification Primer: (SEQ ID NO: 23)
5'CUACUACUACUAGGCCACGCGTCGACTAGTAC3'

H. 5'LPL Primer: (SEQ ID NO: 24)
5' ACCACCATGGAGAGCAAAGCCCTG3'
-start codon of human LPL coding sequence is underlined

I. 3'LPL Primer: (SEQ ID NO: 25)
5' CCAGTTTCAGCCTGACTTCTTATTC3'
-complement to the termination codon of the LPL coding sequence is underlined

J. Primer DLIP774: (SEQ ID NO: 26)
5'GGCTGTGGACTCAACGATGTC3'

K. Primer LLGgen2a: (SEQ ID NO: 27)
5'CCGGGTGGGTAGGTACATTTTG3'

L. Hllg-gsp1 primer: 5' GGG GGT GAC TTC CAG CCA GGC TGT G 3'
(nucleotides 772-796 in Fig. 4, SEQ ID NO: 28)
Hllg-gsp2a primer: 5' AAC TCT GAA AGG CAT GCC TGC CCG G 3'
(reverse complement of nucleotides 1053-1077 in Fig. 4, SEQ ID NO: 29)
G3PDH 5' primer: 5' TGA AGG TCG GAG TCA ACG GAT TTG GT 3'
(SEQ ID NO: 30)
G3PDH 3' primer: 5' CAT GTG GGC CAT GAG GTC CAC CAC 3'
(SEQ ID NO: 31)

FIGURE 1. PCR PRIMERS

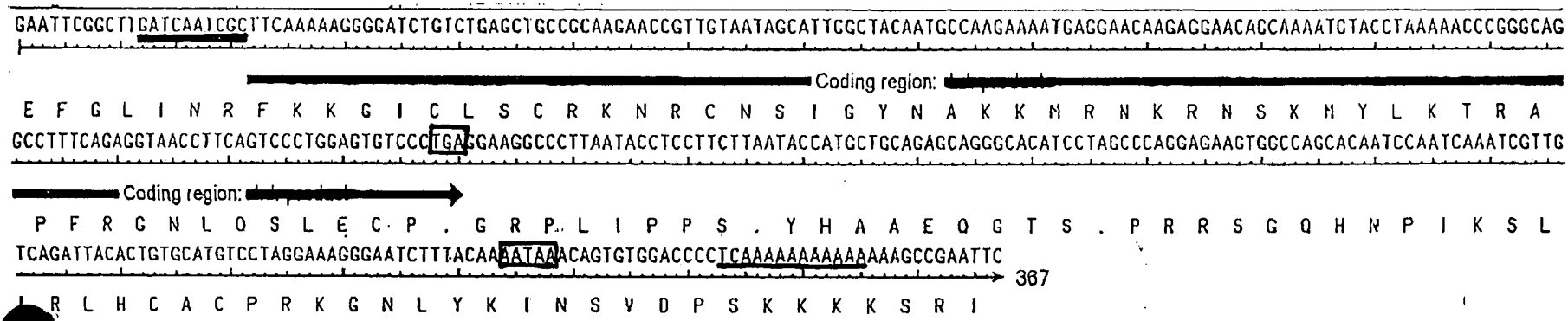


FIGURE 2

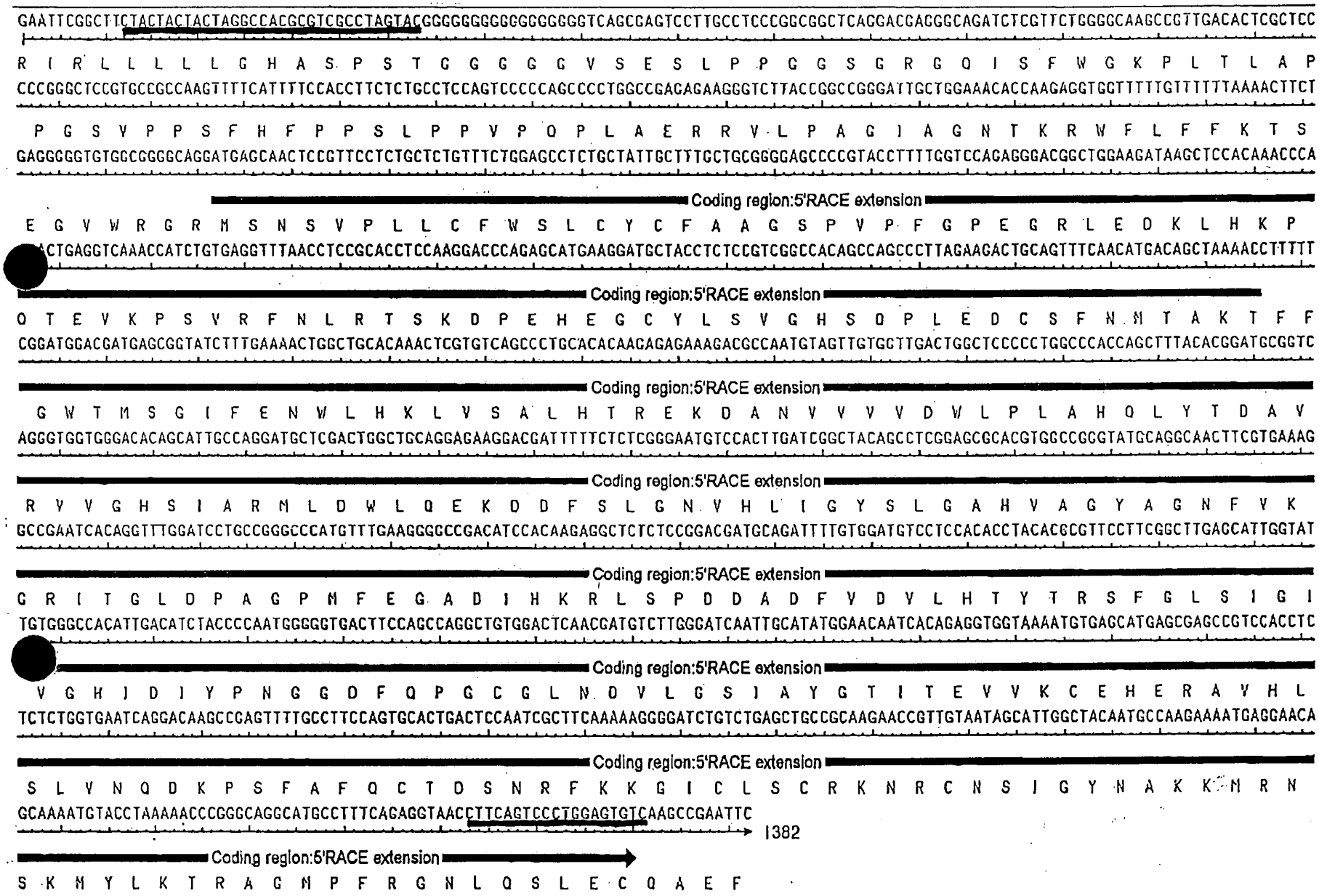


FIGURE 3

GAATTCGCGGCCGCGTCGACGGCGGCTCAGGACGAGGGCAGATCTCGTTCTGGGGCAAGCCG
TTGACACTCGCTCCCTGCCACCGCCCGGGCTCCGTGCCGCCAAGTTTTCATTTTCCACCTTCT
CTGCCTCCAGTCCCCCAGCCCCTGGCCGAGAGAAGGGTCTTACCGGCCGGGATTGCTGGAAA
CACCAAGAGGTGGTTTTTGTTTTTTAAAACTTCTGTTTCTTGGGAGGGGGTGTGGCGGGGCAGG
ATGAGCAACTCCGTTCCTCTGCTCTGTTTCTGGAGCCTCTGCTATTGCTTTGCTGCGGGGAGCC
CCGTACCTTTTGGTCCAGAGGGACGGCTGGAAGATAAGCTCCACAAACCCAAAGCTACACAG
ACTGAGGTCAAACCATCTGTGAGGTTTAACCTCCGCACCTCCAAGGACCCAGAGCATGAAGG
ATGCTACCTCTCCGTCGGCCACAGCCAGCCCTTAGAAGACTGCAGTTTCAACATGACAGCTAA
AACCTTTTTCATCATTCACGGATGGACGATGAGCGGTATCTTTGAAAACTGGCTGCACAAACT
CGTGTCAGCCCTGCACACAAGAGAGAAAGACGCCAATGTAGTTGTGGTTGACTGGCTCCCCCT
GGCCCACCAGCTTTACACGGATGCGGTCAATAATACCAGGGTGGTGGGACACAGCATTGCCA
GGATGCTCGACTGGCTGCAGGAGAAGGACGATTTTTCTCTCGGGAATGTCCACTTGATCGGCT
ACAGCCTCGGAGCGCACGTGGCCGGGTATGCAGGCAACTTCGTGAAAGGAACGGTGGGCCGA
ATCACAGGTTTGGATCCTGCCGGGCCCATGTTTGAAGGGGCCGACATCCACAAGAGGCTCTCT
CCGGACGATGCAGATTTTGTGGATGTCCTCCACACCTACACGCGTTCCTTCGGCTTGAGCATT
GGTATTCAGATGCCTGTGGGCCACATTGACATCTACCCCAATGGGGGTGACTTCCAGCCAGGC
TGTGGACTCAACGATGTCTTGGGATCAATTGCATATGGAACAATCACAGAGGTGGTAAAATGT
GAGCATGAGCGAGCCGTCCACCTCTTTGTTGACTCTCTGGTGAATCAGGACAAGCCGAGTTTT
GCCTTCCAGTGCACTGACTCCAATCGCTTCAAAAAGGGGATCTGTCTGAGCTGCCGCAAGAAC
CGTTGTAATAGCATTGGCTACAATGCCAAGAAAATGAGGAACAAGAGGAACAGCAAAATGTA
CCTAAAAACCCGGGCAGGCATGCCTTTCAGAGTTTACCATTATCAGATGAAAATCCATGTCTT
CAGTTACAAGAACATGGGAGAAATTGAGCCCACCTTTTACGTCACCCTTTATGGCACTAATGC
AGATTCCCAGACTCTGCCACTGGAAATAGTGGAGCGGATCGAGCAGAATGCCACCAACA
CCTTCCTGGTCTACACCGAGGAGGACTTGGGAGACCTCTTGAAGATCCAGCTCACCTGGGAGG
GGGCCTCTCAGTCTTGGTACAACCTGTGGAAGGAGTTTCGCAGCTACCTGTCTCAACCCCGCA
ACCCCGGACGGGAGCTGAATATCAGGCGCATCCGGGTGAAGTCTGGGGAAACCCAGCGGAAA
CTGACATTTTGTACAGAAGACCCTGAGAACACCAGCATATCCCCAGGCCGGGAGCTCTGGTTT
CGCAAGTGTCGGGATGGCTGGAGGATGAAAAACGAAACCAGTCCCACTGTGGAGCTTCCC
TGAGGGTGCCCGGGCAAGTCTTGCCAGCAAGGCAGCAAGACTTCCTGCTATCCAAGCCCATG
GAGGAAAGTTACTGCTGAGGACCCACCCAATGGAAGGATTCTTCTCAGCCTTGACCCTGGAGC
ACTGGGAACAACTGGTCTCCTGTGATGGCTGGGACTCCTCGCGGGAGGGGACTGCGCTGCTAT
AGCTCTTGCTGCCTCTCTTGAATAGCTCTAACTCCAAACCTCTGTCCACACCTCCAGAGCA
CCAAGTCCAGATTTGTGTGTAAGCAGCTGGGTGCCTGGGGCCTCTCGTGCACACTGGATTGGT
TTCTCAGTTGCTGGGCGAGCCTGTACTCTGCCTGACGAGGAACGCTGGCTCCGAAGAGGCCCT
GTGTAGAAGGCTGTCAGCTGCTCAGCCTGCTTTGAGCCTCAGTGAGAAGTCCTTCCGACAGGA
GCTGACTCATGTCAGGATGGCAGGCCTGGTATCTTGCTCGGGCCCTGGCTGTTGGGGTTCTCAT
GGGTTGCACTGACCATACTGCTTACGTCTTAGCCATTCCGTCCTGCTCCCCAGCTCACTCTCTG
AAGCACACATCATTGGCTTTCCTATTTTTCTGTTCATTTTTTAATTGAGCAAATGTCTATTGAAC
ACTTAAAATTAATTAGAATGTGGTAATGGACATATTACTGAGCCTCTCCATTTGGAACCCAGTG
GAGTTGGGATTTCTAGACCCTCTTTCTGTTTGGATGGTGTATGTGTATATGCATGGGGAAAGGC
ACCTGGGGCCTGGGGGAGGCTATAGGATATAAGCAGTCGACGCGGCCGCGAATTC

FIGURE 4

MSNSVPLLCFWSLCYCFAAGSPVPFGPEGRLEDKLHKPKATQTEVKPSVRFNLRTSKDPEHEGCY
LSVGHSQPLEDCSFNMTAKTFFIIHGWTMSGIFENWLHKLVSALHTREKDANVVVVDWLPLAHQL
YTDAVNNTRVVGHSIARMLDWLQEKDDFSLGNVHLIGYSLGAHVAGYAGNFVKGTVGRITGLDP
AGPMFEGADIHKRLSPDDADFVDVLHTYTRSFGLSIGIQMPVGHIDIYPNGGDFQPGCGLNDVLGSI
AYGTITEVVKCEHERAVHLFVDSLVNQDKPSFAFQCTDSNRFKKGICLSCRKNRCNSIGYNAKKM
RNKRNSKMYLKTRAGMPFRVYHYQMKIHVFSYKNMGEIEPTFYVTLYGTNADSQTLPLEIVERIE
QNATNTFLVYTEEDLGDLLKIQLTWEGASQSWYNLWKEFRSYLSQPRNPGRELNIRRIRVKSGETQ
RKLTFCTEDPENTSISPGRELWFRKCRDGWRMKNETSPTVELP

FIGURE 5

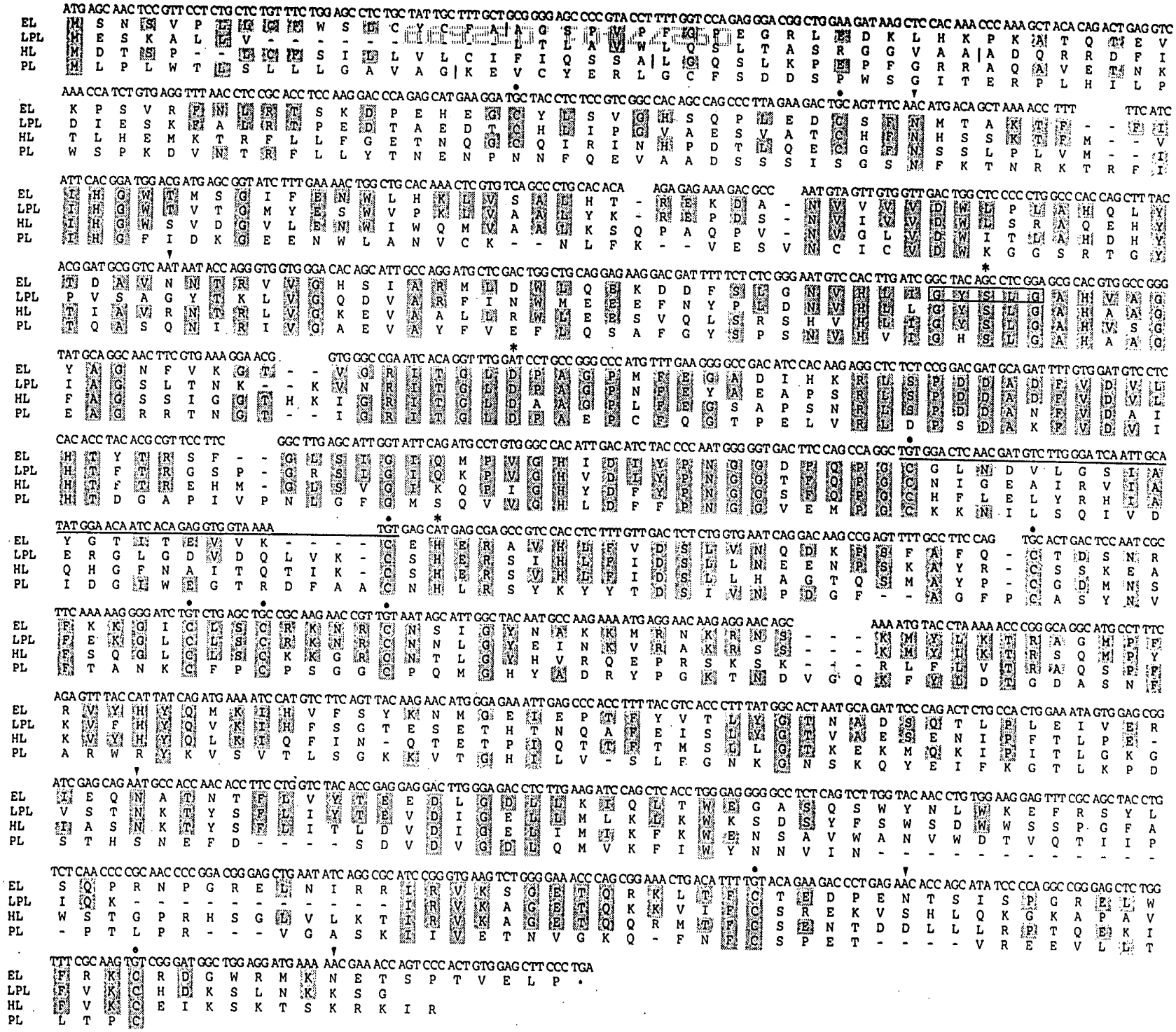


FIGURE 6:

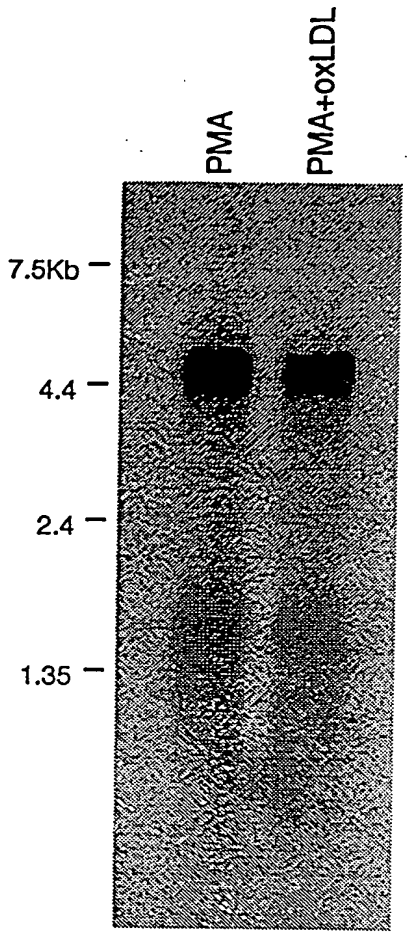


FIGURE 7. Northern analysis of mRNA from THP-1 cells. Cells were stimulated with either PMA or PMA and oxidized LDL (PMA +oxLDL). Numbers to left indicate positions of RNA standards (in kilobases).

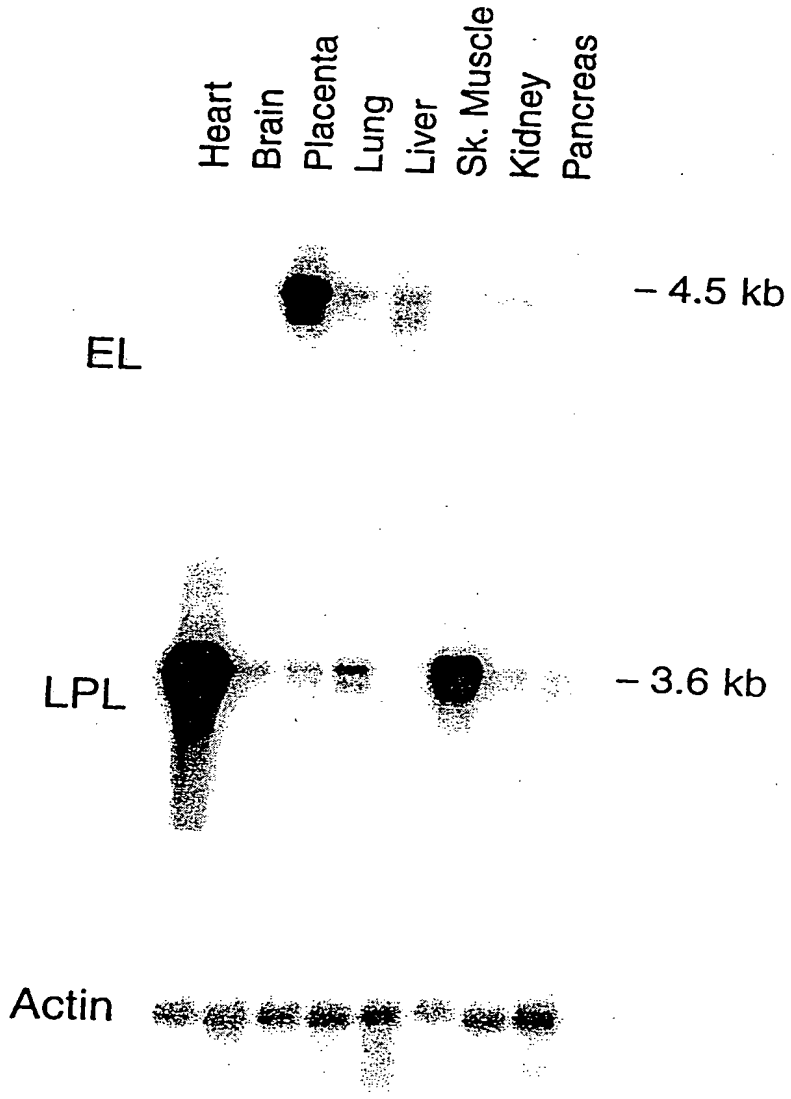

Heart
Brain
Placenta
Lung
Liver
Sk. Muscle
Kidney
Pancreas
EL
– 4.5 kb
LPL
– 3.6 kb
Actin

FIGURE 8:

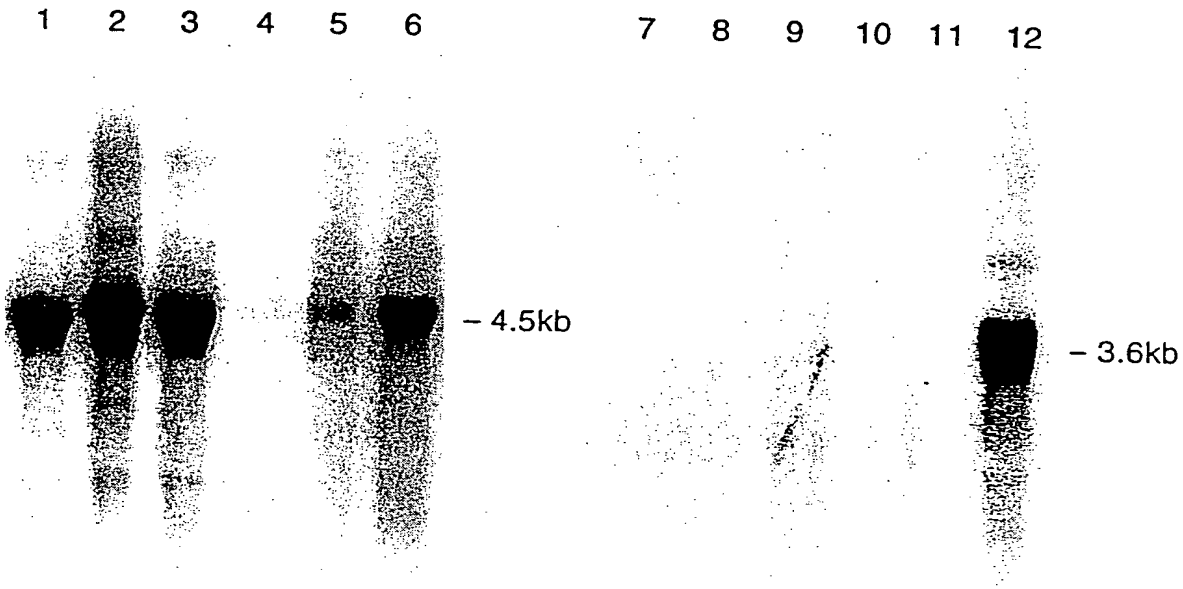


FIGURE 9:

MSNSVPLLCFWSLCYCFAAGSPVPPGPEGRLEDKLHKPKATQTEVKPSVRFNLRTSKDPEHEGCYL
SVGHSQPLEDCSFNMTAKTFFIIHGWTMSGIFENWLHKLVSALHTREKDANVVVVDWLPLAHQLY
TDAVNNTRVVGHSIARMLDWLQEKDDFSLGNVHLIGYSLGAHVAGYAGNFVKGTVGRITGLDPA
GPMFEGADIHKRLSPDDADFVDVLHTYTRSFGLSIGIQMPVGHIDIYPNGGDFQPGCGLNDVLGSIA
YGTITEVVKCEHERAVHLFVDSLVNQDKPSFAFQCTDSNRFKKGICLSCRKNRCNSIGYNAKKMR
NKRNSKMYLKTRAGMPFRVYHYQMKIHVFSYKNMGEIEPTFYVTLYGTNADSQTLPLEIVERIEQ
NATNTFLVYTEEDLGDLLKIQLTWEGASQSWYNLWKEFRSYLSQPRNPGRELNIRRIRVKSGETQR
KLTFCTEDPENTSISPGRELWFRKCRDGWRMKNETSPTVELP

FIGURE 10. Relation of the immunizing peptide used for the generation of antisera with the LLGXL protein sequence. The peptide is shown in the shaded box. The terminal cysteine was intoduced to aid coupling of the peptide to carrier protein.

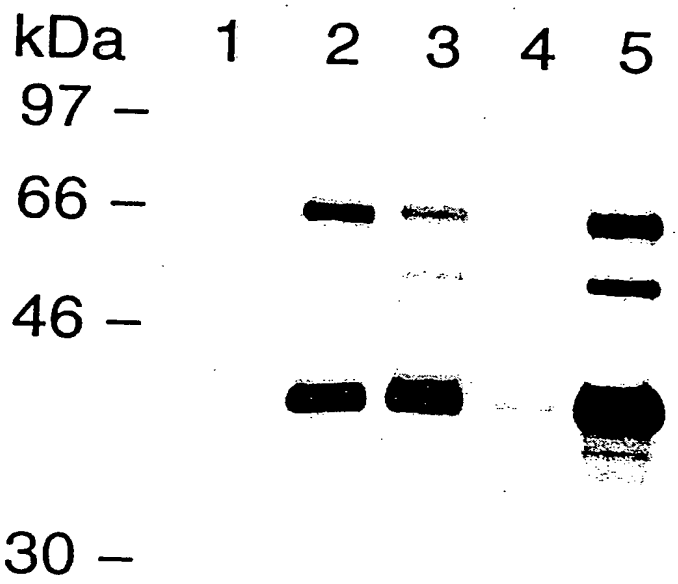


FIGURE 11:

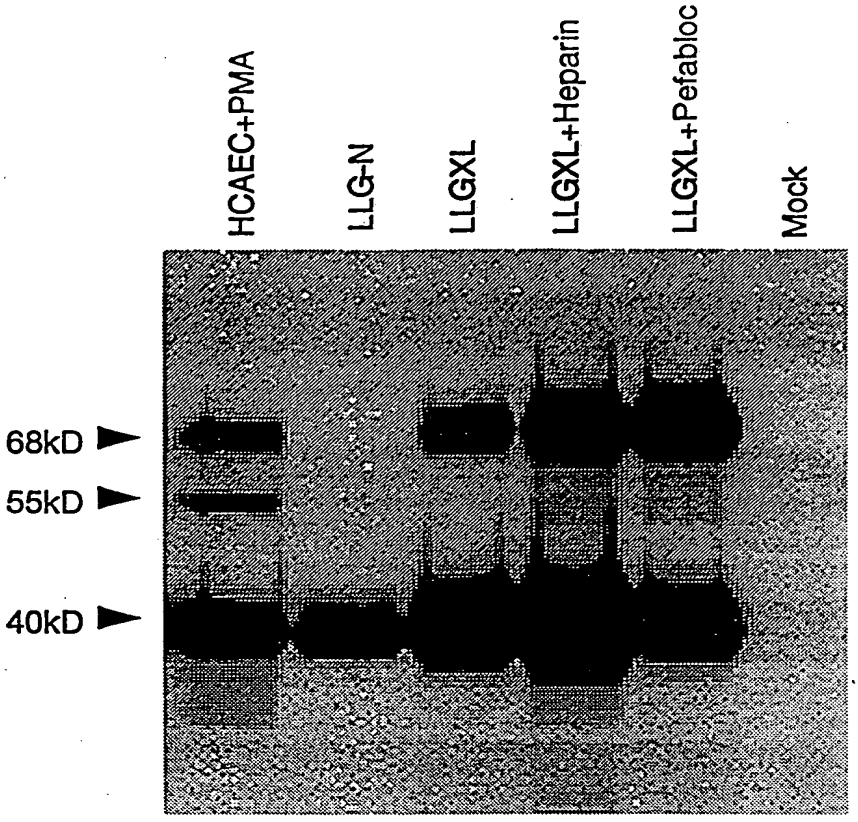


FIGURE 12. Western analysis of heparin-sepharose bound proteins in conditioned medium from transfected COS-7 cells. Cells were transiently transfected with either expression vectors containing cDNA of LLGN or LLGXL cDNA or no DNA (Mock). Proteins from PMA-stimulated endothelial cells (HCAEC+PMA) were included for size reference. Numbers to ithe left indicate the apparent molecular weight of the major immunoreactive proteins relative to protein standards.

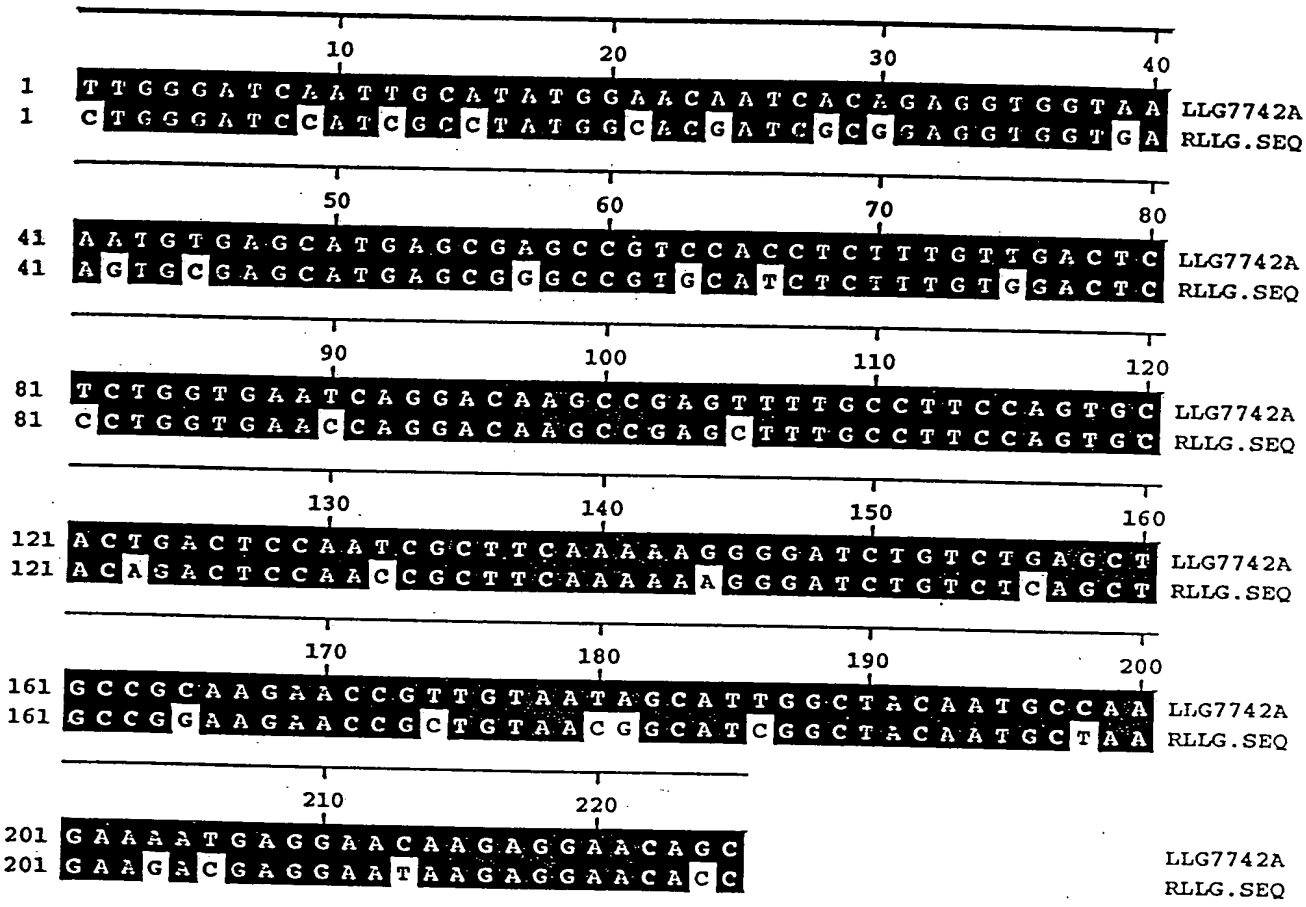

10 20 30 40
1 TTGGGATCAATTGCATATGGAACAATCACAGAGGTGGTAA LLG7742A
1 CTGGGATCCATCGCCTATGGCACGATCGCGGAGGTGGTGA RLLG.SEQ
50 60 70 80
41 AATGTGAGCATGAGCGAGCCGTCCACCTCTTTGTTGACTC LLG7742A
41 AGTGCGAGCATGAGCGGGCCGTGCATCTCTTTGTGGACTC RLLG.SEQ
90 100 110 120
81 TCTGGTGAATCAGGACAAGCCGAGTTTTGCCTTCCAGTGC LLG7742A
81 CCTGGTGAACCAGGACAAGCCGAGCTTTGCCTTCCAGTGC RLLG.SEQ
130 140 150 160
121 ACTGACTCCAATCGCTTCAAAAAGGGGATCTGTCTGAGCT LLG7742A
121 ACAGACTCCAACCGCTTCAAAAAAGGGATCTGTCTCAGCT RLLG.SEQ
170 180 190 200
161 GCCGCAAGAACCGTTGTAATAGCATTGGCTACAATGCCAA LLG7742A
161 GCCGGAAGAACCGCTGTAACGGCATCGGCTACAATGCTAA RLLG.SEQ
210 220
201 GAAAATGAGGAACAAGAGGAACAGC LLG7742A
201 GAAGACGAGGAATAAGAGGAACACC RLLG.SEQ

FIGURE 13:

EL Triglyceride and Phopholipase Activities

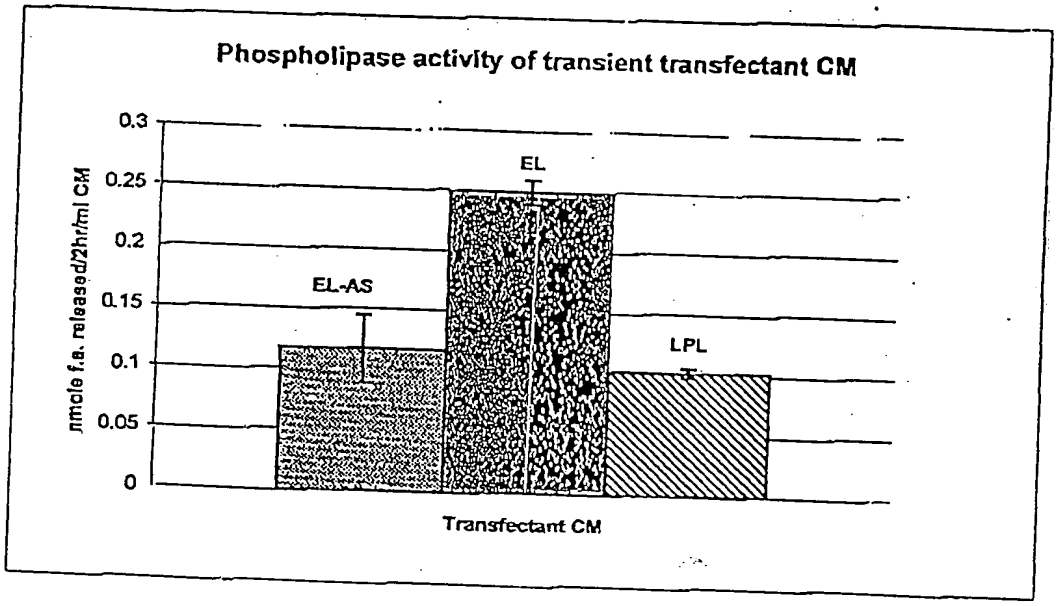


FIGURE 14:

EL Triglyceride and Phopholipase Activities

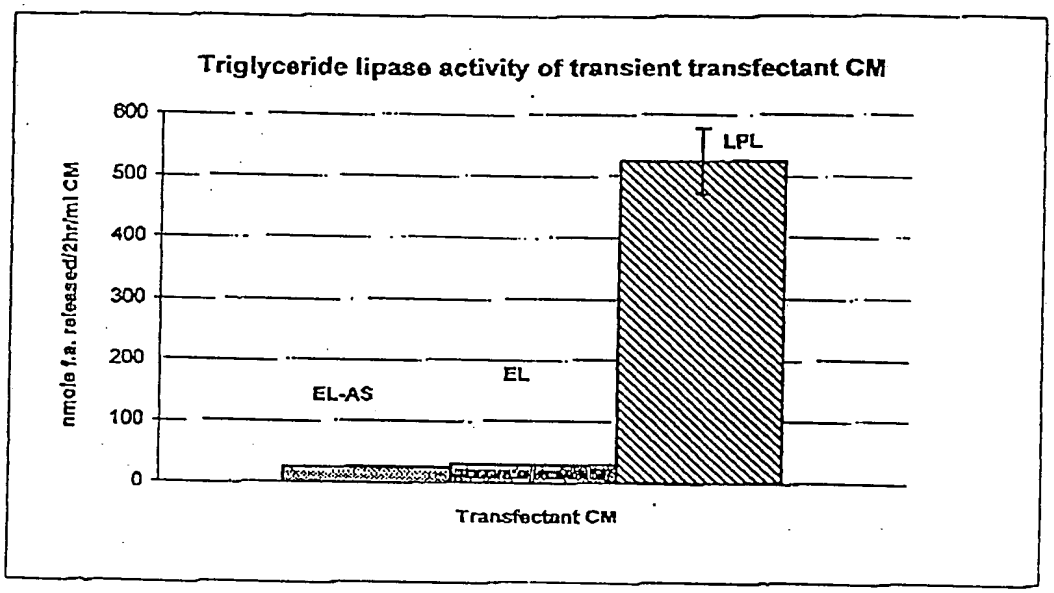


FIGURE 15:

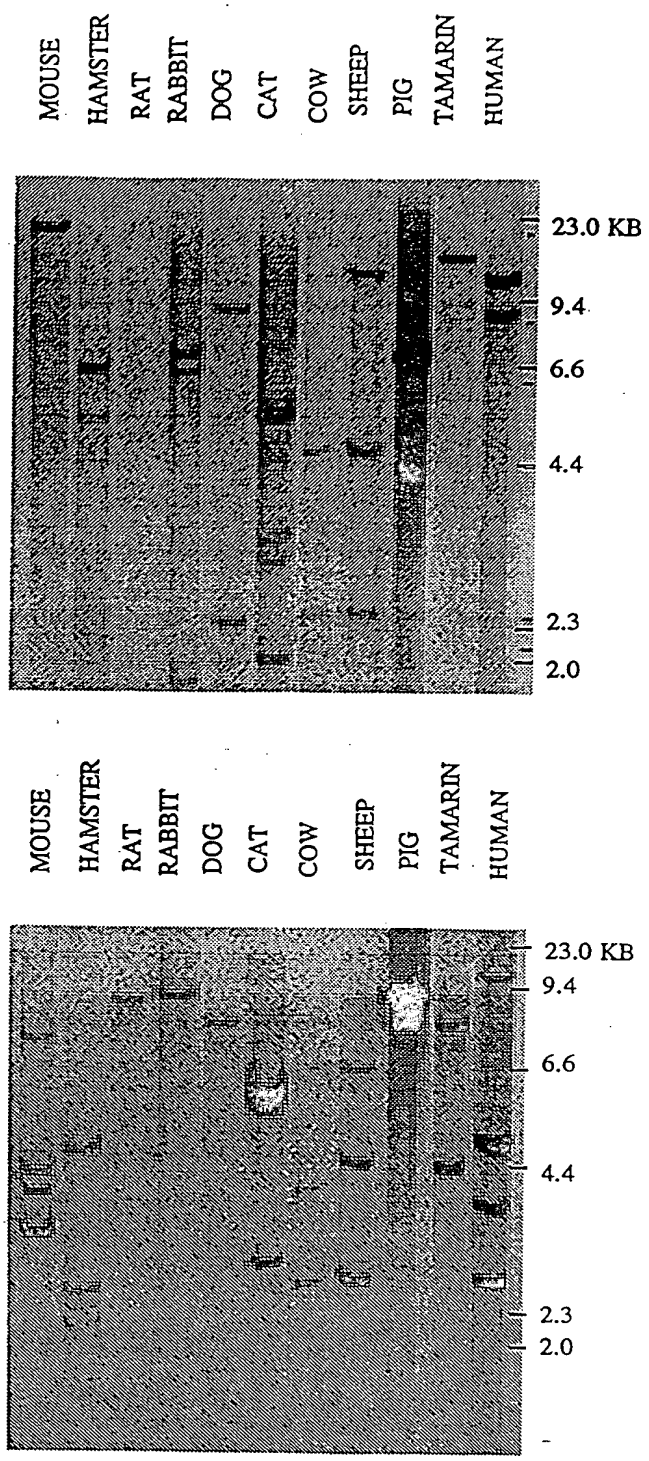


FIGURE 16: Southern blot of LLG and LpL genes in a variety of mammalian species.

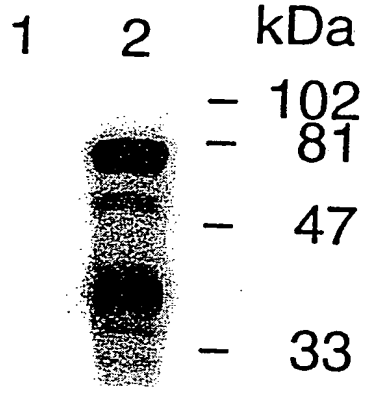


FIGURE 17:

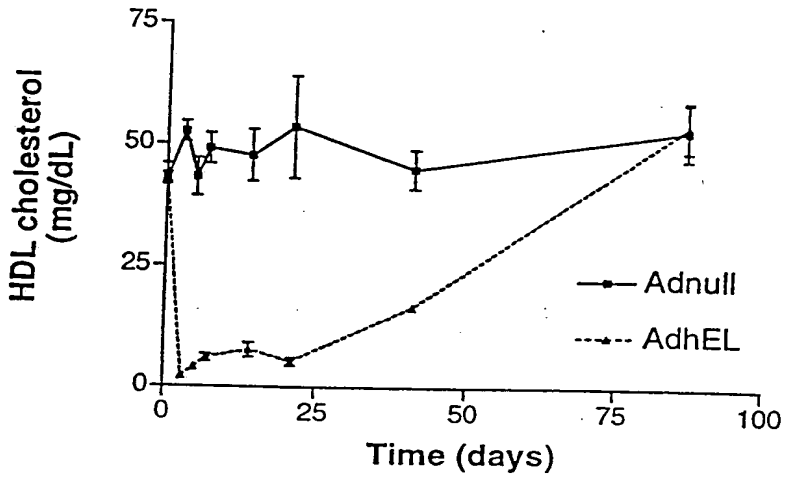
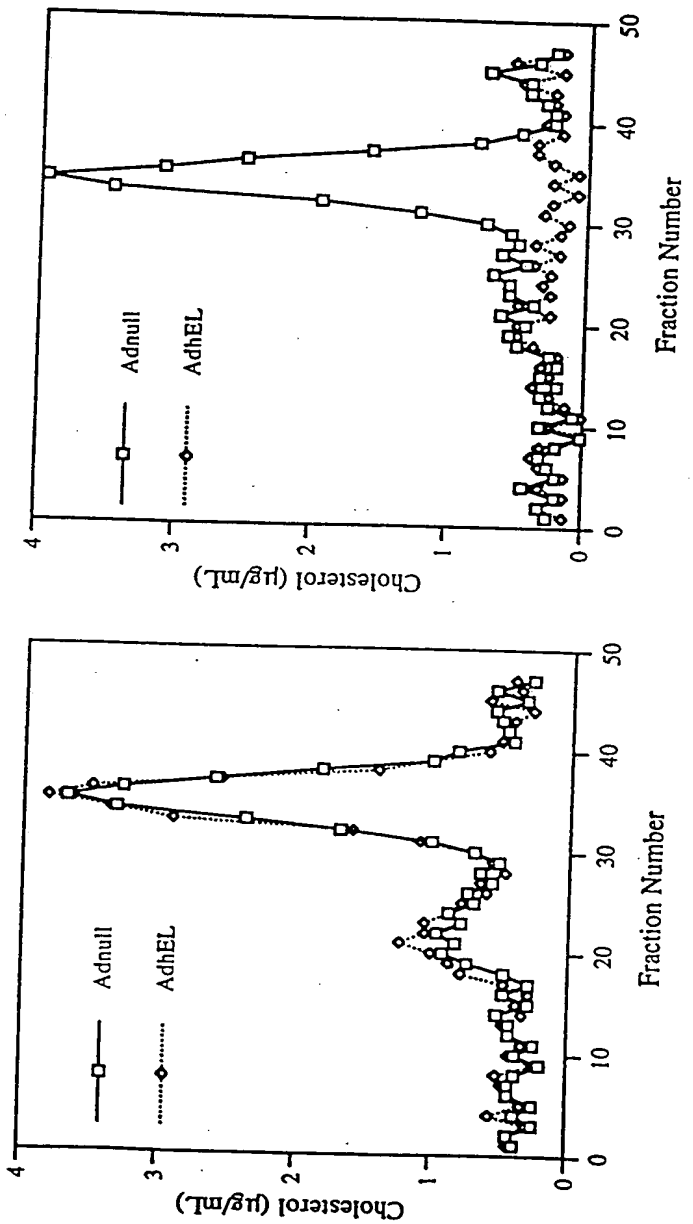

HDL cholesterol (mg/dL)
75
50
25
0
0
25
50
75
100
Time (days)
Adnull
AdhEL

FIGURE 18:

FIGURE 19:


Cholesterol (µg/mL)
Fraction Number
Adnull
AdhEL
0
1
2
3
4
10
20
30
40
50

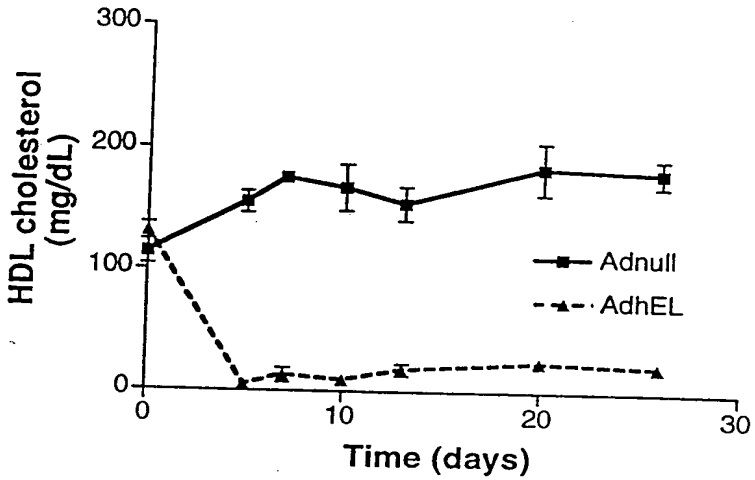

300
200
100
0
HDL cholesterol (mg/dL)
0
10
20
30
Time (days)
Adnull
AdhEL

FIGURE 20:

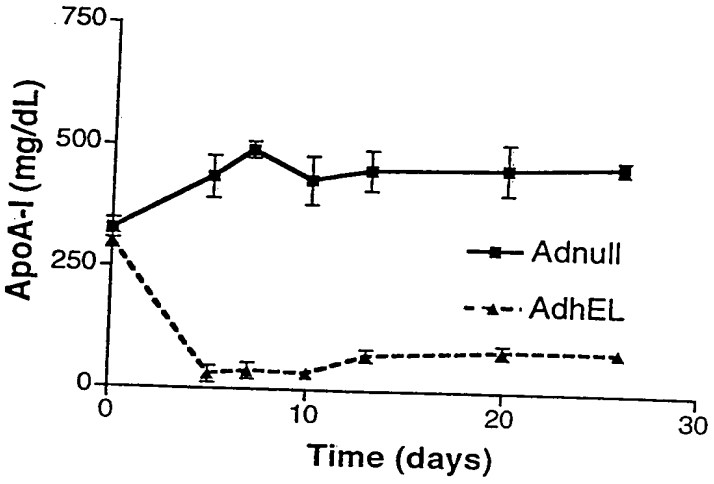


FIGURE 21:

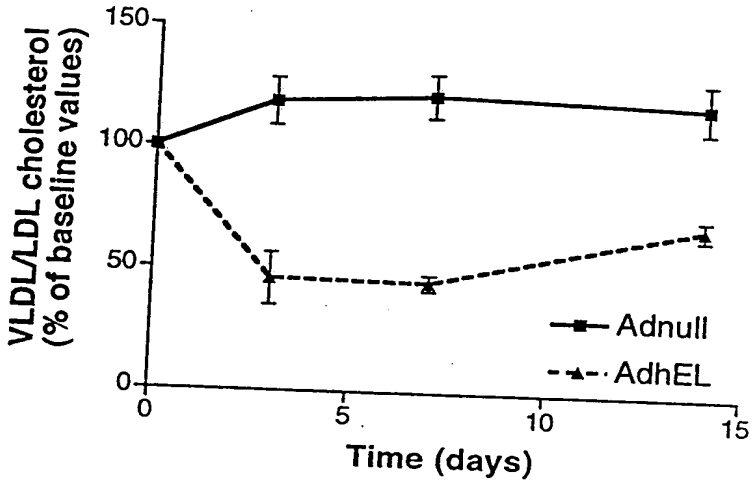

VLDL/LDL cholesterol
(% of baseline values)
150
100
50
0
0
5
10
15
Time (days)
Adnull
AdhEL

FIGURE 22:

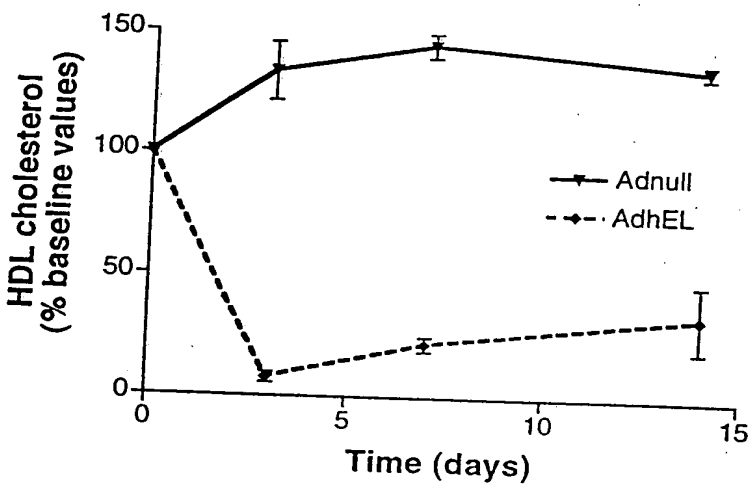

150
100
50
0
0
5
10
15
HDL cholesterol
(% baseline values)
Time (days)
Adnull
AdhEL

FIGURE 23: